





WOOD

—

TIMES MENDED

—

1681



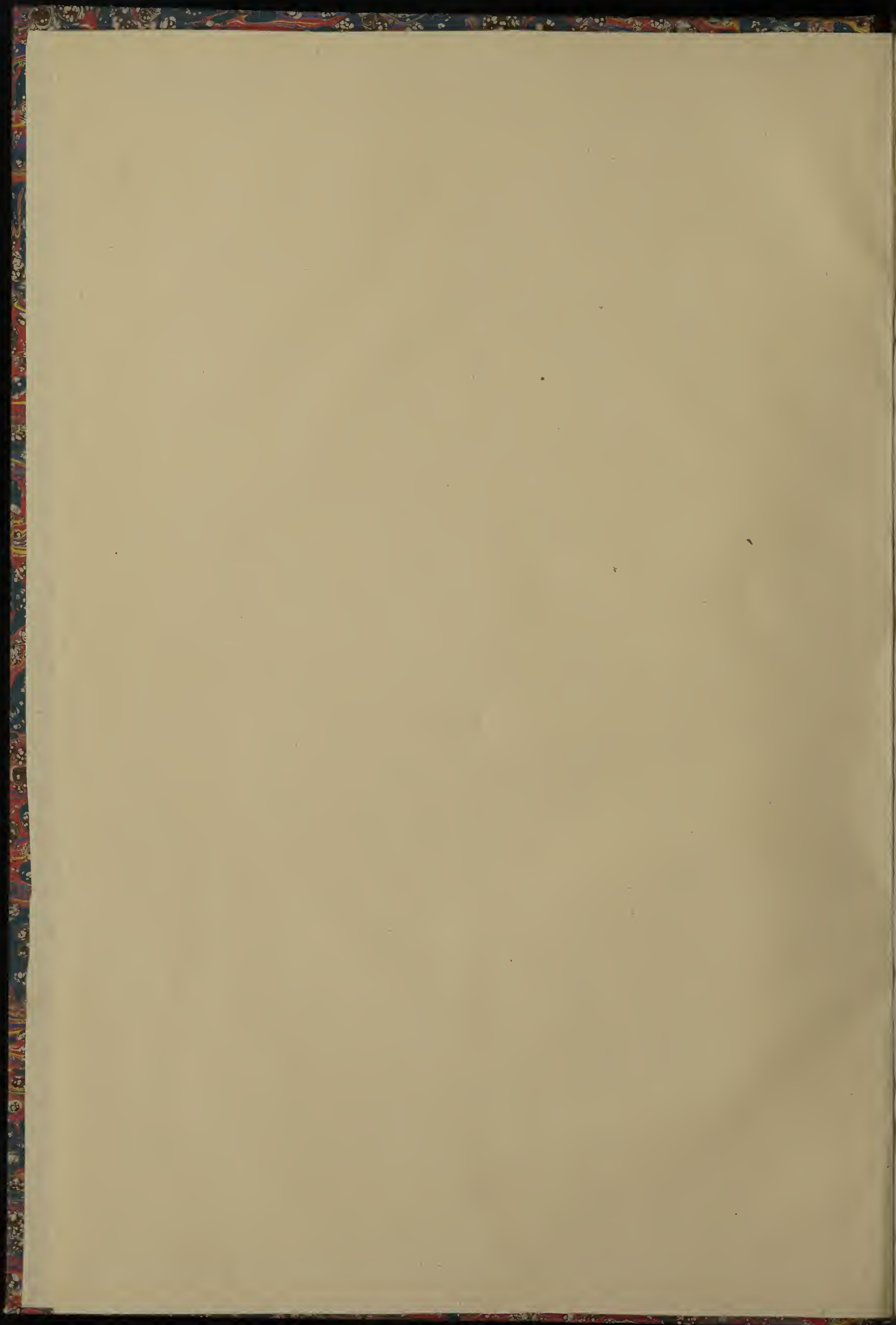






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THE 75747  
Times Mended:  
OR, A  
RECTIFIED ACCOUNT  
OF  
TIME,  
BY A  
New Luni-Solar Year;  
THE  
TRUE WAY  
TO  
Number our Days.

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By R. W. LL.D.  
*Robert Wood*  
Fellow of the ROYAL SOCIETY.

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Ad AUTHOREM.  
*Ad minimum revocas Errores Temporis: O si  
Corrigeres Mores Temporis arte pari!*

F. K.

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LONDON, Printed by E. Tyler, and R. Holt, for  
Jonath. Robinson and Ben. Tooke, both in S. Paul's  
Church-Yard. 1681.

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Times Bled:

OF THE

T I M E

BY A

New Lunar-Solar Year:

THE

T R I E W A Y

TO

RECOVERING THE LOST

OF THE

RECOVERING THE LOST

RECOVERING THE LOST

RECOVERING THE LOST





# A New AL-MON-AC for Ever;

or

A Rectified Account of Time,  
(beginning with March 10 1680)  
by a Luni-solar Year, or by both Luminaries:

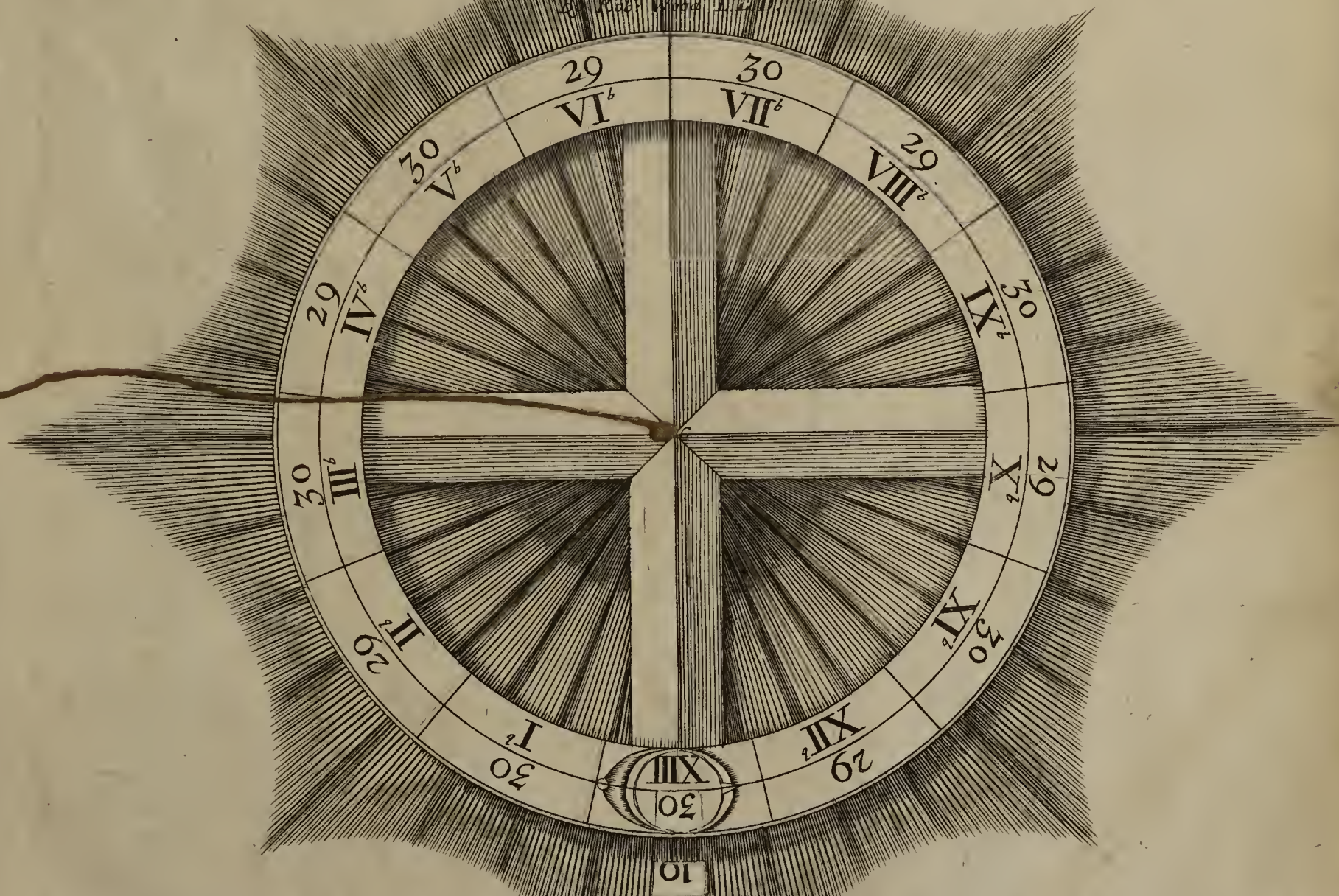
That is

By the *Moons* Monthly Course primarily; so as the *First of the Month* shall always be within *about a Day* of the *Change*:

And yet adjusted to the *Suns* yearly Course also;  
viz Keeping within about a *Week* thereof at a medium:

DESCRIBED in, &  
DEDICATED to the most Honorable ORDER of  
THE GARTER.

By Rob: Wood LL.D.



The GARTER shewes the Number of *Days* (30, 29; 30, 29 &c) which each of the *Twelve Months* of the year is to containe: And in the *Buckle* is discovered, through a *Hole*, the days of a *Thirteenth Month* (31, 30; 31, 30 &c) to be added to *Some years*, viz to *Fourteen of Thirty eight*; or more particularly, to the years { 2, 5, 7, 10, 13, 15, 18 }  
{ 21, 24, 26, 29, 32, 34, 37 }  
of a certain *Period* or Revolution completed in 38 yeares; as in a *Cycle* or *Rundle* behind; which is supposed movable one 38<sup>th</sup> part, every year, *backwards* or contrary to the Months in the *Garter*: And the *year of the Period* or *Cycle*, or what 38<sup>th</sup> year is *Current*, is shewed through another *Hole*. & so on for ever  
Once every *Century*, or to one Year of 100, adde one *Day*. viz to neer about the middle of the *First Century*, & then to every 100<sup>th</sup> year following. *Winfor Castle*.



1. The first of these is the

the second of these is the

the third of these is the

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the seventh of these is the

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the thirteenth of these is the

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the forty-fifth of these is the



A  
NEW-YEARS GIFT:  
OR, THE  
TRUE WAY  
TO  
Number our Days,  
AND

KNOW THE TIMES:

WITH AN ACCOUNT

How they have been; and how they may be farther Mended.

**A**LL Nations we have had any Commerce with, even those called Barbarous, being found to *reckon* their *Time* one way or other, and ordinarily by the most equable Motions or Revolutions of the greatest Heavenly Luminaries, (at least, appearing so to us) such universal Consent seems to imply some considerable *use* or *conveniency* of such *Reckoning*. As for Example, to count their own Age, and the Ages of their Friends or Relations, their memorable Actions or Accidents, or those of their Country, or Governours: To date their Civil Contracts and Agreements; of which, if one or both parts were to be performed at any determinate future day or time, to mark when, or how long it would be before that time or day was to come. And in many such other like Instances the *measuring of Time* is so much imployed by all men, that it seems to be one of those Properties or Characters that distinguish Men from Beasts; and therefore the more worthy of our Inquiry. But tho all Nations seem thus to conspire in the Use of the Thing, yet have they not all, nor the same Nation at all times, used the same *Standard or Way of Reckoning*: For besides the shorter measure of a *Day* or *ἡμέραν*, which they all reckon'd by, the number of days in larger Accounts, proved too great to be remembred; and therefore they found it expedient to use some longer measure also; as of *Months*, or Circuits of the *Moon*; or of *Years*, that is Circuits or Revolutions of the *Sun*; or both. Now according to the different apprehensions or opinions which several people had of the length or quantity of the Revolutions of those Luminaries which made their Months or Years; that is, how many days made a complete Month or Year; or what greater number of days made such a complete number of Months or Years, the *length* of the Month or Year was different in several Ages and Countries: some thought the *Year* consisted of just 360 days, and therefore probably they divided the *Ecliptick* (or the supposed Line in the Heavens in which the *Sun* appears to perform his Yearly Course) into 360 equal parts or degrees, according



ing to which the Egyptian King made an huge Circle or Ring of Gold in the Suns Temple, so divided; they likewise thought the *Moons* Circuit to consist of just 30 days, and so made three *Months* in a Quarter of a Year, and twelve Months in the Year, ( 12 times 30 making 360 ) and consequently they divided the *Zodiac* into twelve parts, or Signs. Others thought there were but 28 days in the *Month*, which they divided into Quarters, consisting of 7 days each, which probably was the original of *Weeks*; But After-Ages found there were more than 360 Days in the Year, and so they added 5 days; others finding the *Solar Year* yet too short, added a quarter of a day more, which in four Years makes a whole Day, called the *Leap day*, or *Bissextile*, by *Julius Caesar*, upon the Advice of his Astronomer *Sosigenes*, who yet only took the measures of *Calippus*, a Grecian, designed for another purpose; thus was the *Julian Year* or Account framed with intent to follow the *Suns* course only, without making any use of that of the *Moon*; which Account held generally in these parts of the World till within an hundred years past; but the *Julian Year* being found by experience too long, viz. having anticipated near 15 days since *Caesar's* time, Pope *Gregory* the Thirteenth, in the Year 1582, made the Year shorter by three days in four hundred Years, and so introduced a new Account in all those Countries that would follow him, as far as the greatest part of *Europe* did. His Account, tho more correct than the former, is yet judged by many to want much of that exactness which an Account of time is capable of.

On the other side many of the *Europeans* anciently, as most of the *Eastern* People still, and also divers of the *West Indians* do reckon their time by the *Moon*, and so probably did the *Jews* heretofore, who now reckon by both *Moon* and *Sun*, with no small Curiosity: but the *Grecians*, or some of the *Athenians* at least, had for several Ages laboured that point very far, and framed an excellent *Luni-Solar Year*; but yet both the one and the other were short of exactness, tho their ways of Account are intricate enough, and seem somewhat too fine for vulgar Capacities.

The consideration of all which put me upon thoughts of examining, *Whether* ( which has hitherto been only wished for among other *Desiderata* ) *whether*, I say, a way of reckoning our Time might not at length be contrived, not inferior to the exactness of any *Astronomical Observations*, and yet not superior to the Understanding of the lowest sort of common people; which two Ends of being exact and easie are all that can be reasonably desired in any civil Account. In order whereunto, I considered, First, that the Revolutions of all the other *Heavenly Bodies* ( besides those of the *Sun* and *Moon* ) tho perhaps equable enough in themselves, yet did not so appear unto us; and farther that they were of more difficult and nice Observation, even to the most curious Astronomers. Secondly, That the *Annual Revolution of the Sun* was either not exactly known, or at least not so universally agreed on. Thirdly, that there were means and ways far more exact of knowing the *Moons Course*, than that of the *Sun*; and tho there are 3600 Thirds in a Minute of an Hour ( viz. 60 times 60 ) yet that the *Moons Course* was better known, or at least better agreed on, to *Thirds*, than the *Suns* to *Minutes*; so that a reckoning by the *Moon* seems to have some hundreds of times the advantage of one by the *Sun*, as to exactness. Fourthly, that the *Changes of the Moon* were obvious to every eye. And fifthly, that in measuring time primarily by the *Moon*, we might reckon by the *Sun* also, exactly enough for the business of *Husbandry* and other civil Affairs; but that the same *vice versa* could not so well be done, measuring time primarily by the *Sun*.

Upon all which, and divers other considerations, I have, not without some pains, contrived a certain way of a *Luni-Solar Account*, so exact that one day need not be lost or got in Millions of Years, and yet so clear, short and easie ( and the more plain and simple the better ) that I have made a Youth of twelve years old to understand, and remember it too, all in an hour. And indeed the great obstacle to the right understanding of this is the apprehension of Difficulty, where there



is none; and the prejudice or prepossession of the mind with the old way of Reckoning.

My greatest labour and pains has been to make this work easie to others; the work, I say, I have cut out of the hard Rock, without any other help from first to last, (except common Observations, long since Printed) but what I had from the Division or Powder of the Rock it self, or rather from the Rock of Ages, *Cui sit laus in secula seculorum. Amen.*

As for all other possible ways of *Measuring Time*, whether such as have been already practised in some part of the world, or not; I shall venture to say this of them in general, *viz.* that they will either want a Foundation in *Nature*, or else come short of mine in point of *Exactness*.

But if any man shall discover a better way of measuring Time, or find a material fault in this my Contrivance (tho'tis easie to find faults almost in any thing, or to add to any Invention) I'll promise him a better Reward for his labour, than I expect for mine, tho no such Error, or better way can be found.

In a thing of so universal Use or Convenience to all Mankind, as the *Reckoning of Time*, it is matter of Wonder, that the best way of doing it has not hitherto been found out in so great a number of Ages as the Earth hath lasted, especially since so many excellent Wits in several Parts and Ages of the World have employed their Endeavours therein: But I see that *Time* and *Chance*, which happen to all, happeneth also to *Time* it self.

I shall now in few words give you my Contrivance (and that two manner of Ways, one for the *Pen* or *Memory* with the Demonstration; the other contrived into the Honourable Garter for an *Instrument* or *Clock-work*;) and afterwards I shall add, by way of illustration, some further Remarks thereupon.

A Specimen of  
A NEW ALMONAC FOR EVER:  
OR,

A Rectified Account of TIME, by a Luni-Solar Year.

That is,

By the Moon's Monthly Course primarily, so as the First of the Month shall always be within a Day of the Change; And yet adjusted to the Sun's yearly Course also.

LET the New Year, or Account begin with March 10, 1688. the New Moon and Vernal Equinox in the Meridian of Windsor-Castle, being also near the same, *viz.* the former being about  $\frac{1}{4}$  of an hour after Midnight; and the latter near as much before it: or it may begin at any other Epoche when the New Moon and Equinox, or Solstice (if that be thought a better time to begin the year,) happen both near the beginning of the Civil Day, which perhaps they very seldom will be found to do. From such Epoche or Beginning, let the following Months, which in ordinary Years are Twelve only, have days 30, 29; 30, 29, &c. alternately: But in Fourteen Years of a certain Period or Revolution completed in Thirty eight Years, *viz.* in the Years { 2, 5, 7, 10, 13, 15, 18 } let there be intercalated or added to those extraordinary Years, a Thirteenth Month, consisting of Days 31, 30; 31, 30, &c. alternately also: And so on, Period after Period, for ever, as the Moon, &c.

Once every Century, or to one Year of 100, add one Day, *viz.*

To near about the first 50th Year, or middle of the Century, and then to every 100th Year following. Which additional Day being omitted every 230th, or 240th Century, or thereabouts (according to the Latitude of the differing Opinions of Dissenters in Astronomy) that is, once in 23 or 24000 Years (only the first omission to be about the middle thereof, if any one should require such great exactness) will balance the Account for ever. But we need not be solicitous about that remote consideration. The



(Which may be passed over by those who are not accustomed to Mathematical Demonstrations.)

Besides common known Principles, denied by none, I suppose, or take for granted only two Things, *viz.*

1. That the Motions of the great Bodies of Heaven, particularly of our great Luminaries, the Sun and Moon, are Regular or Uniform, or at least do approach somewhat near towards being so.

2. That in taking the measures of their Motions, especially that of the Moon, all the famous Astronomers, Ancient and Modern, have not been much mistaken.

This Account of Time being made up by continued *Addition*, or *Multiplication*, the Truth or Exactness thereof may be easily Examined or *Demonstrated*, only by Division of the number of *Days* in my Period or number of *Years* assigned, by the number of *Months* contained in the same; and the *Quotient* shall be (the *Days*, and parts of a *Day* in) a *Month*; or the Time at a *Medium* between Change and Change, according to the exactest Astronomers, ancient and modern. As for Example,

In 38 Years there are Months or Lunations 470, *viz.* (38 times 12) or 456 and 14 intercalar ones. And in 38 Years there are Days (38 times 12 *viz.*) 456 times 29, that is 13452, and 14 times 30, or 427, that is in all 13879 whole Days; together with 38 hundredth parts of a Day, *viz.* in all 13879.38, because one day is to be added every 100 years: Or more plainly thus, In (100 times 38, *viz.*) 3800 years, there are 47000 Months, and 1387938 Days. Multiply the said 3800 Years by 6, and likewise the said Months and Days by 6 respectively, *viz.*

Years.	Months.	Days.	
3800	47000	1387938	} And omitting one day in the said 22800 years, there remains at last 8327627 Days.
6	6	6	
22800	282000	8327628	

Divide 8327627 by 282000, the Quotient will be Days 29:5305921985, that is 29 days, 12 h. 44 min. 3 sec. 10 third. (almost) *viz.* the Month of *Ricciolus*.

But if to each of the above Years, Months and Days respectively you add a twentieth part, there will be near 24000 years, *viz.*

Years.	Months.	Days.	
22800	282000	8327628	} And omitting one Day in the said 23940 Years, as before, there remains at last 8744008.4 Days.
1140	14100	416381.4	
23940	296100	8744009.4	

Divide 8744008.4 by 296100, the Quotient will be Days 29:53059236744, that is 29 day. 12 h. 44 min. 3 sec. 10 third. 50 fourth. (almost) *viz.* between the Months of *Copernicus* and *Kepler*, &c. Near which, or between both, is probably the just quantity of the *mean Month of Conjunction*. However, tho it should hereafter be found out to be less than the one, or greater than the other; yet the Account of Time by me proposed will hold good for about twelve thousand years yet to come; at which time the said Additional Day being omitted (only some few years sooner or later, as by experience shall appear best before that time) will keep right, and balance the Account for millions of years after.

But if any one will assign me the exact quantity or measure of the *Mean Month of Conjunction*, I shall tell him precisely what Century (or Year if he please) the said Additional Day is to be omitted: For the best Astronomers do differ a little even upon that Account, as may appear by the following List.

The Measure of the Mean Month of Conjunction, according to the Astronomers following, *viz.*

	d.	h.	m.	se.	th.	fo.		d.	h.	m.	se.	th.	fo.
Hipparch.	29	12	44	3	15	44							
Ptolomy.													
Lansberg.													
Wendelin.													
Kepler.	29	12	44	3	10	50							
Copernic.													
Reinold.													
Clavius.													
	29	12	44	3	10	48							
	29	12	44	3	10	43							
	29	12	44	3	9	37							
	29	12	44	3	8	39							



Some farther Remarks on the preceding Account.

(Formerly published in the Philosophical Collections. N. 2.)

**T**He *Egyptian Hieroglyphick* of the Year was a *Serpent* curv'd into a Circle or Ring, with Tail in Mouth: but the Emblematical *Garter* will be much more proper for *England*, &c, and is so exactly fitted to the Moon's motion, that perhaps it will be hard to judge, upon consulting a whole Jury of *Astronomers*, ancient and modern, whether it will prove too streight or too large a measure of Time; and the exceeding small difference between this Account and some of their Calculations on one side or other, may rationally enough be ascribed to the imperfection of Instruments or Observations, 'till the farther experience of future Ages, many thousand years hence, shall evince the contrary.

This *Almonac* measures Time principally by the Moon, but with a great and near respect to the annual motion of the Sun or Earth: The Unite or least Measure is a Day; and the *Garter* or *Luni-Solar* Year will be, at a *Medium*, within about a Week, or half a hundreth part, of the true *Solar* Year; that is, so near that the difference will not be discern'd by ordinary popular Observation, (and therefore must needs answer the ends of Husbandry, and other civil Affairs, well enough;) And at certain periods balance one another, and have a kind of coincidence or agreement, much better than the Sun's course has with the *Fulian* Account, so much magnified by *Scaliger* and others.

I find the elder World generally computed their Time (and most of the Eastern Countries, if not the bulk of Mankind, do so still) by the Moon, or by a *Lunar*, or *Luni-Solar* Year; made up of *Lunations*, or real Months, or somewhat near the matter such, (and not such in name only, as ours now are; being, as it were, but the Ghosts and deformed Shadows of their old Moons and Reckoning:) Which Months were for the most part 12, and some years 13: This appears from their Kalendars, &c. 'Tis plain (from 1 *Sam. c.* 20. *v.* 5, 18, 24. compared with *v.* 27, 34.) that the days of the *Jewish* Month, were the same with those of the Moon: And the *Grecians* (where *Astronomy*, as well as other Arts and good Learning most flourish'd, and particularly the *Athenians* according to the Institution of their wise Legislator, *Solon*) did thus reckon their Time; and so did the *Romans* too, till *Fulius Caesar* alter'd, I cannot say, mended, the Year.

Among the *Grecians* there liv'd, in three not far distant Ages, three famous *Astronomers* in their several Times; *Meton*, *Calippus*, and *Hipparchus*; each of whom still farther improv'd *Astronomy*, and rectified the Accounts of Time more and more one after another respectively, according to their light and the Observations of their own and the foregoing Ages: *Hipparchus*, the last of them (and unto whom our modern *Astronomers*, with all their helps and advantages, have been able to add very little as to the exactness of some of his Observations) he flourish'd about 100 or 90 Years before *Fulius Caesar* alter'd the Year; yet *Caesar*, or his *Astronomer* *Sosigenes*, followed *Calippus* in framing the *Fulian* Year; as I find by examining their Accounts: For *Calippus* his Period of 76 Years consisted of 27759 Days, and so do 76 *Fulian* Years. About three Centuries and an half after *Caesar*, the Council of *Nice* (first,) and about two Centuries after that, *Dionysius Exiguus* (again) introduced the *Decennoval Cycle* (called the *Golden Number*) for the Celebration of *Easter*; following *Meton*, the first and least exact of the Three; or rather following both *Meton* and *Caesar*, two Masters, who were neither of them the best, and would after some time disagree and part farther and farther from each other, tho both *Caesar* and the Church might have had much better Copy from *Hipparchus*: Which mistakes of theirs (and their Eyes being dazzled with the Sun, whereas they might have looked more safely on



the Moon) have occasioned those Anticipations and Differences, that have embarrassed the *Accounts of Time*, and these Parts of the World in the succeeding Ages. And tho many have proposed laudable ways of redressing the said Accounts, yet still building upon the old Foundations, which were infirm; Pope Gregory XIII, in his Reformation of the Kalendar near 100 years since, was necessitated to wave the *Golden Number*, and yet has but palliated the Disease; so hard it is to cure an Error in the first Concoction: Wherefore inverting a Dyptic of Ovid's, 1 *Fast.* one may say,

*Scilicet Arma magis, Cæsar, quam Sidera nôras:*

*Rêsqûe, Æternæ, & non Tempora, cura Patrum.*

The Council of *Nice* appointed *Easter* to be kept the first Sunday after the first Full Moon after the 21th of *March*; because the Vernal Equinox (which was on the 25th in our Saviour's time, or thereabouts) was then come to be on or about the said 21th Day; and therefore the *Gregorian* Reformation has reduced the Vernal Equinox back to that Day, or brought that Day to it again, by losing 10 Days, and must omit another Day within 20 Years: But in this Garter or Luni-Solar Year, *Easter* will always be the first Sunday after the first Full Moon of the New Year, that is, after the Vernal Equinox; according to the true intent and meaning of the *Nicene* Council, or as it was in the Primitive Times; and be but a Week moveable, or a Month less-moveable than now, either after the Old or New Stile: Which might perhaps have prevented the Difference, or served as an Expedient for reconciling the West and East Churches.

The three Cycles of *Meton*, *Calippus*, and *Hipparchus*, were all of them too large for the Sun, and primarily intended for the Moon, or for a Luni-Solar Year; however that of *Hipparchus* was nearest to both, and very near the Moon's Period.

Perhaps at first view, my 38 Years Period may be looked upon but as a double-*Metonic*, or semi-*Calippic* one, &c. but upon farther consideration, it will be found otherwise; for *Meton* and *Calippus*, their Periods, as also that of *Hipparchus*, were all of them too big, not only for the Circuit of the Sun, as I said before, but for that of the Moon also; whereas mine, on the other hand, was too little for either, and needed one additional Day in near about every 100 Years:

*Meton's* 19 Years Cycle, or *Enneadecaeteris*, had 6940 Days, the } 13880

Double whereof is

*Calippus* his Period, or 76 Years, had 27759 Days, the half whereof is 13879½

*Hipparchus* his Period of 304 Years, had 111035 Days, the Eighth } 13879¾  
part whereof is

Whereas my Period hath but Days

13879:38

So that it may easily appear, to any one who shall please to examine it, wherein my Cycle or Period differs from all theirs: But the Frame of my Contrivance of this so nice matter, for the easie Explication thereof, even to the grossest Capacities, as to Practice and Use, is wholly different from theirs, and every ones else I ever yet heard of.

I am not so vain, as to perswade my self, that any such Account of Time will be used, and therefore do not set down the Uses of this; which otherwise I could do, and shew how the Practice thereof need not make any disturbance in Civil Affairs or Contracts.

For 'tis not unlike but that, after 1700 Years Prescription, prudent Men may judge it better to let the Year and World go on without alteration; as Physicians say, Some Chronical Diseases in old Folks may with more safety be continued, than their Cure endeavoured; and that one had better follow old beaten Highways, tho crooked and foul, than seek out, or make new ones: And perhaps I should have thought so too; but Pope Gregory XIII having already chang'd the old *Julian* Account, and his new Model having taken place, and obtained in the major part of all the West of *Europe*, or *Christendom*; We, who are Reformed in other things, seem now to be left almost alone, or with some few other Places,

ces,



ces, in this. And several Persons having from time to time offered their Proposals towards the amendment of the erroneous *Julian* Year, I thought I might without offence offer mine also; which are not so novel, but that the like thereof, tho framed with less artifice, have endured the Test in many well policed Nations for several Ages.

It may afford one Argument, by the by, against the old Way, or Year, That like a Finger-Watch, it needs so frequent setting, and must have a New Almanac got every year; whereas one Direction in this Luni-Solar Way may serve for all Ages; and the Garter may be so well buckled once for all, that it may last for ever, as the Moon, &c.

I chose rather to take the Revolution of the Moon, than that of the Sun, for my chief and primary Measure of Time; because, First, the Lunar Phases, and consequently Months, are more easily discerned, than the Sun's annual Period, even by the most ignorant vulgar Eyes, who need but look up almost any night, to see their *Almonac*: Next, the Observations upon the Moon, made by more knowing Men, have been more in Number, more exact and of far greater Antiquity; *Astronomers* having also had the help of Eclipses of very distant Ages, for their Guide in finding out very near the true measure of the Moon's mean Motion: Lastly, keeping an Account by the Moon, we may reckon by the Sun also, that is to say, by Months and Years too; whereas on the contrary, reckoning by a Solar Year, the Months are but empty Names, and in measuring of *Times* and *Seasons* the Moon is rendred of no use; tho some inanimate Bodies (so considerable, that they take up and possess perhaps half this our Globe) as the *Sea*, do exactly observe the Moon's Course; and there are living Creatures also, thought perhaps no less considerable at Land, that do the like; which I need not mention, nor take any farther notice of the near Affinity, if not Consanguinity with the Garter.

To conclude; the Sum of what I have done, is, after the finding a *Par* or Equation, or a very near Approach thereunto, between Days and Months, in whole Numbers, with a respective balancing the Sun's Annual Motion also, To render the use thereof very easie and ready for Practice. I could in larger Periods keep a more regular balancing Account with the Sun, by a small addition, or very little alteration of one Rule of these Cycles; or by other great Cycles I could perform all that these do; or by a farther Decomposition of Cycles I could, I say, approach to a yet greater exactness, nearer and nearer to any given quantity, *in infinitum*; But *ne quid nimis*.

Upon the whole Matter, I judge an Account of Time by the Moon to be much better than any such Account by the Sun; because (setting aside other considerations) I have reason to doubt, that, as we are in the dark in reference to divers other particulars about the Sun, so likewise the Measure of the true Solar-Year is much taken up on trust, or is not so well known, perhaps never will be, or at least is not so universally agreed on, to near that degree of exactness, as that of the Moon, which God appointeth for *Times and Seasons*, as the faithful Witness in Heaven.

Skenville, April 13,  
1680.

ROBERT WOOD.

TO



TO the end that this new *Luni-Solar Account* or Year may be the better understood by any one who understands an ordinary Almanac, and more easily compared with the old *Julian Year*; and that it may appear how the days of the Month in *one* do answer the Days in the *other*; and that the *Changes* of the Moon may be the more readily observed and examined (which will always happen in this new *Luni-Solar Account*, within a day of the beginning of the Month) I have here framed

## A Luni-Solar KALENDAR.

O R,

A Parallel of Days between That and the Julian Year;  
Shewing what Day of the Month of the One, will be the same with the  
Respective correspondent Day of the Other.  
Beginning with March 10, 1680

Every Page consists of twelve double Columns: *That* on the left hand, or *First* of the two Columns, containing all the Days of the several Months of the *Julian Year*, or old *Stile*, viz. *March, April, May, June, &c.* And the *second* Column, or *that* towards the right hand, containing the several respective Days of the *Lunar Months* which are in the *Luni-solar* or *Garter Year*.

In which second Columns are signified by

$\left\{ \begin{smallmatrix} 1 \\ 1 \end{smallmatrix} \right\}$	or	$\left\{ \begin{smallmatrix} 1 \\ 1 \end{smallmatrix} \right\}$	or	$\left\{ \begin{smallmatrix} 1 \\ 2 \end{smallmatrix} \right\}$	or	$\left\{ \begin{smallmatrix} 1 \\ 6 \end{smallmatrix} \right\}$	&c.	The 1st Cycle or Period completed in 38 Years.
I		II		V		X		The Year of that Cycle, viz. 1st. 2d. 6th, &c.
								The Month of that Year, viz. 1st. 2d. 5th. 10th, &c.

In each of the said double Columns there are two *Julian Months* (except the first, which wants 9 Days, and they are made up at last.)

If this Design should ever be imagined to take, and this *New Years Gift* be accepted, the following *Parallel* would prove a Guide to people for the mutual performance of their *Bargains de futuro*, that is to know the certain After day, as well in one *Stile* as the other; when they are to be observed, and made good, and so may serve them as a *Bridge* in passing over from one Account or Year unto the other, with their *Civil Contracts* and other Baggage.



# A Parallel of Days between the Julian and Luni-solar Years.

9

1680	Mar.	May.	July.	Sept.	Nov.	IX.	Janu.	Mar.	May.	July.	Sept.	Nov.	Jan.
1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9	9	9	9	9
10	10	10	10	10	10	10	10	10	10	10	10	10	10
11	11	11	11	11	11	11	11	11	11	11	11	11	11
12	12	12	12	12	12	12	12	12	12	12	12	12	12
13	13	13	13	13	13	13	13	13	13	13	13	13	13
14	14	14	14	14	14	14	14	14	14	14	14	14	14
15	15	15	15	15	15	15	15	15	15	15	15	15	15
16	16	16	16	16	16	16	16	16	16	16	16	16	16
17	17	17	17	17	17	17	17	17	17	17	17	17	17
18	18	18	18	18	18	18	18	18	18	18	18	18	18
19	19	19	19	19	19	19	19	19	19	19	19	19	19
20	20	20	20	20	20	20	20	20	20	20	20	20	20
21	21	21	21	21	21	21	21	21	21	21	21	21	21
22	22	22	22	22	22	22	22	22	22	22	22	22	22
23	23	23	23	23	23	23	23	23	23	23	23	23	23
24	24	24	24	24	24	24	24	24	24	24	24	24	24
25	25	25	25	25	25	25	25	25	25	25	25	25	25
26	26	26	26	26	26	26	26	26	26	26	26	26	26
27	27	27	27	27	27	27	27	27	27	27	27	27	27
28	28	28	28	28	28	28	28	28	28	28	28	28	28
29	29	29	29	29	29	29	29	29	29	29	29	29	29
30	30	30	30	30	30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31	31	31	31	31	31

C

Mar.



## A Parallel of Days between the Julian and Luni-solar Years.

Mar.	May	July	Sep.	Nov.	Jan.	Mar.	May	July	Sept.	Nov.	Jan.
1 14	1 14	1 15	1 19	1 21	1 23	1 24	1 26	1 28	1 2	1 4	1 6
2 15	2 15	2 17	2 20	2 22	2 24	2 25	2 27	2 29	2 3	2 5	2 7
3 16	3 16	3 18	3 21	3 23	3 25	3 26	3 28	V.	3 4	3 6	3 8
4 17	4 17	4 19	4 22	4 24	4 26	4 27	4 29	3 1	4 5	4 7	4 9
5 18	5 18	5 20	5 23	5 25	5 27	5 28	III.	4 2	5 6	5 8	5 10
6 19	6 19	6 21	6 24	6 26	6 28	6 29	I.	5 3	6 7	6 9	6 11
7 20	7 20	7 22	7 25	7 27	7 29	I.	6 2	6 4	7 8	7 10	7 12
8 21	8 21	8 23	8 26	8 28	IX.	4 1	7 3	7 5	8 9	8 11	8 13
9 22	9 22	9 24	9 27	9 29	XI.	5 2	8 4	8 6	9 10	9 12	9 14
10 23	10 23	10 25	10 28	IX.	10 1	6 1	9 5	9 7	10 11	10 13	10 15
11 24	11 24	11 26	11 29	10 2	11 3	7 2	10 6	10 8	11 12	11 14	11 16
12 25	12 25	12 27	VII.	11 2	12 4	8 3	11 7	11 9	12 13	12 15	12 17
13 26	13 26	13 28	12 1	12 3	13 5	9 4	12 8	12 10	13 14	13 16	13 18
14 27	14 27	14 29	13 2	13 4	14 6	10 5	13 9	13 11	14 15	14 17	14 19
15 28	15 28	V.	14 3	14 5	15 7	11 6	14 10	14 12	15 16	15 18	15 20
16 29	16 29	15 1	15 4	15 6	16 8	12 7	15 11	15 13	16 17	16 19	16 21
17 30	III.	16 2	16 5	16 7	17 9	13 8	16 12	16 14	17 18	17 20	17 22
18 31	17 1	17 3	17 6	17 8	18 10	14 9	17 13	17 15	18 19	18 21	18 23
I.	18 2	18 4	18 7	18 9	19 11	15 10	18 14	18 16	19 20	19 22	19 24
19 1	19 3	19 5	19 8	19 10	20 12	16 11	19 15	19 17	20 21	20 23	20 25
20 2	20 4	21 7	20 9	20 11	21 13	17 12	20 16	20 18	21 22	21 24	21 26
21 3	21 5	22 8	21 10	21 12	22 14	18 13	21 17	21 19	22 23	22 25	22 27
22 4	22 6	23 9	22 11	22 13	23 15	19 14	22 18	22 20	23 24	23 26	23 28
23 5	23 7	24 10	23 12	23 14	24 16	20 15	23 19	23 21	24 25	24 27	24 29
24 6	24 8	25 11	24 13	24 15	25 17	21 16	24 20	24 22	25 26	25 28	25 30
1683	25 9	26 12	25 14	25 16	26 18	22 17	25 21	25 23	26 27	26 29	XII.
25 7	26 10	27 13	26 15	26 17	27 19	23 18	26 22	26 24	27 28	27 30	X.
26 8	27 11	28 14	27 16	27 18	28 20	24 19	27 23	27 25	28 29	28 31	28 1
27 9	28 12	29 15	28 17	28 19	29 21	25 20	28 24	28 26	29 30	29 2	29 3
28 10	29 13	30 16	29 18	29 20	30 22	26 21	29 25	29 27	30 31	30 3	30 4
29 11	30 14	31 17	30 19	30 21	31 23	27 22	30 26	30 28	Oct.	Dec.	31 5
30 12	31 15	Oct.	Dec.	Dec.	Feb.	28 23	31 27	31 29	Oct.	Dec.	31 6
31 13	June	Aug.	1 20	1 22	2 24	29 24	June	Aug.	1 2	1 4	Feb.
Apr.	1 16	1 18	2 21	2 23	3 25	30 25	1 28	1 30	2 3	2 5	1 7
1 14	2 17	2 19	3 22	3 24	4 26	31 26	2 29	VI.	3 4	3 6	2 8
2 15	3 18	3 20	4 23	4 25	5 27	Apr.	3 30	IV.	4 5	4 7	3 9
3 16	4 19	4 21	5 24	5 26	6 28	1 26	4 1	3 2	5 6	5 8	4 10
4 17	5 20	5 22	6 25	6 27	7 29	2 27	5 2	4 3	6 7	6 9	5 11
5 18	6 21	6 23	7 26	7 28	8 30	3 28	6 3	5 4	7 8	7 10	6 12
6 19	7 22	7 24	8 27	8 29	IX.	4 29	7 4	6 5	8 9	8 11	7 13
7 20	8 23	8 25	9 28	9 30	X.	5 30	8 5	7 6	9 10	9 12	8 14
8 21	9 24	9 26	10 29	10 31	VIII.	6 1	9 6	8 7	10 11	10 13	9 15
9 22	10 25	10 27	11 30	11 31	IX.	7 2	10 7	9 8	11 12	11 14	10 16
10 23	11 26	11 28	12 29	12 31	X.	8 3	11 8	10 9	12 13	12 15	11 17
11 24	12 27	12 29	1 1	1 3	11 4	9 4	12 9	11 10	13 14	13 16	12 18
12 25	1 1	1 3	2 4	2 6	12 5	10 5	13 10	12 11	14 15	14 17	13 19
13 26	2 2	2 4	3 5	3 7	13 6	11 6	14 11	13 12	15 16	15 18	14 20
14 27	3 3	3 5	4 6	4 8	14 7	12 7	15 12	14 13	16 17	16 19	15 21
15 28	4 4	4 6	5 7	5 9	15 8	13 8	16 13	15 14	17 18	17 20	16 22
16 29	5 5	5 7	6 8	6 10	16 9	14 9	17 14	16 15	18 19	18 21	17 23
17 30	6 6	6 8	7 9	7 11	17 10	15 10	18 15	17 16	19 20	19 22	18 24
18 1	7 7	7 9	8 10	8 12	18 11	16 11	19 16	18 17	20 21	20 23	19 25
19 2	8 8	8 10	9 11	9 13	19 12	17 12	20 17	19 18	21 22	21 24	20 26
20 3	9 9	9 11	10 12	10 14	20 13	18 13	21 18	20 19	22 23	22 25	21 27
21 4	10 10	10 12	11 13	11 15	21 14	19 14	22 19	21 20	23 24	23 26	22 28
22 5	11 11	11 13	12 14	12 16	22 15	20 15	23 20	22 21	24 25	24 27	23 29
23 6	12 12	12 14	1 15	1 17	23 16	21 16	24 21	23 22	25 26	25 28	24 30
24 7	1 13	1 15	2 16	2 18	24 17	22 17	25 22	24 23	26 27	26 29	25 31
25 8	2 14	2 16	3 17	3 19	25 18	23 18	26 23	25 24	27 28	27 30	26 32
26 9	3 15	3 17	4 18	4 20	26 19	24 19	27 24	26 25	28 29	28 31	27 33
27 10	4 16	4 18	5 19	5 21	27 20	25 20	28 25	27 26	29 30	29 32	28 34
28 11	5 17	5 19	6 20	6 22	28 21	26 21	29 26	28 27	30 31	30 33	29 35
29 12	6 18	6 20	7 21	7 23	29 22	27 22	30 27	29 28	31 3	31 5	30 36
30 13	7 19	7 21	8 22	8 24	30 23	28 23	31 28	30 29	31 4	31 6	31 37

Mar.



# A Parallel of Days between the Julian and Luni-Solar Years.

11

Mar.	May.	July.	Sept.	Nov.	Janu.	Mar.	May.	July.	Sept.	Nov.	Jan.
1 6	1 8	1 10	1 13	1 15	1 17	1 17	1 18	1 20	1 23	1 25	1 27
2 7	2 9	2 11	2 14	2 16	2 18	2 18	2 19	2 21	2 24	2 26	2 28
3 8	3 10	3 12	3 15	3 17	3 19	3 19	3 20	3 22	3 25	3 27	3 29
4 9	4 11	4 13	4 16	4 18	4 20	4 20	4 21	4 23	4 26	4 28	XI.
5 10	5 12	5 14	5 17	5 19	5 21	5 21	5 22	5 24	5 27	5 29	4 1
6 11	6 13	6 15	6 18	6 20	6 22	6 22	6 23	6 25	6 28	IX.	5 2
7 12	7 14	7 16	7 19	7 21	7 23	7 23	7 24	7 26	7 29	VII.	6 3
8 13	8 15	8 17	8 20	8 22	8 24	8 24	8 25	8 27	8 30	6 1	7 4
9 14	9 16	9 18	9 21	9 23	9 25	9 25	9 26	9 28	9 31	7 2	8 5
10 15	10 17	10 19	10 22	10 24	10 26	10 26	10 27	10 29	10 31	8 3	9 6
11 16	11 18	11 20	11 23	11 25	11 27	11 27	11 28	11 30	11 31	9 4	10 7
12 17	12 19	12 21	12 24	12 26	12 28	12 28	12 29	12 31	12 31	10 5	11 8
13 18	13 20	13 22	13 25	13 27	13 29	13 29	13 30	13 31	13 31	11 6	12 9
14 19	14 21	14 23	14 26	14 28	14 30	14 30	14 31	14 31	14 31	12 7	13 10
15 20	15 22	15 24	15 27	15 29	XII.	XII.	15 31	15 31	15 31	13 8	14 11
16 21	16 23	16 25	16 28	16 30	X.	X.	16 31	16 31	16 31	14 9	15 12
17 22	17 24	17 26	17 29	17 31	17 31	17 31	17 31	17 31	17 31	15 10	16 13
18 23	18 25	18 27	18 30	18 31	18 31	18 31	18 31	18 31	18 31	16 11	17 14
19 24	19 26	19 28	19 31	19 31	19 31	19 31	19 31	19 31	19 31	17 12	18 15
20 25	20 27	20 29	20 31	20 31	20 31	20 31	20 31	20 31	20 31	18 13	19 16
21 26	21 28	21 30	21 31	21 31	21 31	21 31	21 31	21 31	21 31	19 14	20 17
22 27	22 29	22 31	22 31	22 31	22 31	22 31	22 31	22 31	22 31	20 15	21 18
23 28	23 30	23 31	23 31	23 31	23 31	23 31	23 31	23 31	23 31	21 16	22 19
24 29	24 31	24 31	24 31	24 31	24 31	24 31	24 31	24 31	24 31	22 17	23 20
1684	25 1	25 3	25 5	25 7	25 9	25 11	25 13	25 15	25 17	23 18	24 21
II.	26 2	26 4	26 6	26 8	26 10	26 12	26 14	26 16	26 18	24 19	25 22
26 1	27 3	27 5	27 7	27 9	27 11	27 13	27 15	27 17	27 19	25 20	26 23
27 2	28 4	28 6	28 8	28 10	28 12	28 14	28 16	28 18	28 20	26 21	27 24
28 3	29 5	29 7	29 9	29 11	29 13	29 15	29 17	29 19	29 21	27 22	28 25
29 4	30 6	30 8	30 10	30 12	30 14	30 16	30 18	30 20	30 22	28 23	29 26
30 5	31 7	31 9	31 11	31 13	31 15	31 17	31 19	31 21	31 23	29 24	30 27
31 6	Jun.	Aug.	Oct.	Dec.	Febr.	Apr.	June.	Aug.	Oct.	Dec.	Feb.
Apr.	I 9	I 11	I 13	I 15	I 17	I 18	I 20	I 22	I 24	I 26	I 29
1 7	2 10	2 12	2 14	2 16	2 18	2 19	2 21	2 23	2 25	2 27	2 30
2 8	3 11	3 13	3 15	3 17	3 19	3 20	3 22	3 24	3 26	3 28	XII.
3 9	4 12	4 14	4 16	4 18	4 20	4 21	4 23	4 25	4 27	4 29	3 1
4 10	5 13	5 15	5 17	5 19	5 21	5 22	5 24	5 26	5 28	5 30	4 2
5 11	6 14	6 16	6 18	6 20	6 22	6 23	6 25	6 27	6 29	X.	5 3
6 12	7 15	7 17	7 19	7 21	7 23	7 24	7 26	7 28	7 30	VIII.	6 4
7 13	8 16	8 18	8 20	8 22	8 24	8 25	8 27	8 29	8 31	8 1	7 5
8 14	9 17	9 19	9 21	9 23	9 25	9 26	9 28	9 30	9 31	9 2	8 6
9 15	10 18	10 20	10 22	10 24	10 26	10 27	10 29	10 31	10 31	10 3	9 7
10 16	11 19	11 21	11 23	11 25	11 27	11 28	11 30	11 31	11 31	11 4	10 8
11 17	12 20	12 22	12 24	12 26	12 28	12 29	12 31	12 31	12 31	12 5	11 9
12 18	13 21	13 23	13 25	13 27	13 29	13 30	13 31	13 31	13 31	13 6	12 10
13 19	14 22	14 24	14 26	14 28	14 30	14 31	14 31	14 31	14 31	14 7	13 11
14 20	15 23	15 25	15 27	15 29	15 31	15 31	15 31	15 31	15 31	15 8	14 12
15 21	16 24	16 26	16 28	16 30	16 31	16 31	16 31	16 31	16 31	16 9	15 13
16 22	17 25	17 27	17 29	17 31	17 31	17 31	17 31	17 31	17 31	17 10	16 14
17 23	18 26	18 28	18 30	18 31	18 31	18 31	18 31	18 31	18 31	18 11	17 15
18 24	19 27	19 29	19 31	19 31	19 31	19 31	19 31	19 31	19 31	19 12	18 16
19 25	20 28	20 30	20 31	20 31	20 31	20 31	20 31	20 31	20 31	20 13	19 17
20 26	21 29	21 31	21 31	21 31	21 31	21 31	21 31	21 31	21 31	21 14	20 18
21 27	22 30	22 31	22 31	22 31	22 31	22 31	22 31	22 31	22 31	22 15	21 19
22 28	23 31	23 31	23 31	23 31	23 31	23 31	23 31	23 31	23 31	23 16	22 20
23 29	24 32	24 32	24 32	24 32	24 32	24 32	24 32	24 32	24 32	24 17	23 21
III.	25 3	25 5	25 7	25 9	25 11	25 13	25 15	25 17	25 19	25 20	24 22
24 1	26 4	26 6	26 8	26 10	26 12	26 14	26 16	26 18	26 20	26 21	25 23
25 2	27 5	27 7	27 9	27 11	27 13	27 15	27 17	27 19	27 21	27 22	26 24
26 3	28 6	28 8	28 10	28 12	28 14	28 16	28 18	28 20	28 22	28 23	27 25
27 4	29 7	29 9	29 11	29 13	29 15	29 17	29 19	29 21	29 23	29 24	28 26
28 5	30 8	30 10	30 12	30 14	30 16	30 18	30 20	30 22	30 24	30 25	
29 6	31 9	31 11	31 13	31 15	31 17	31 19	31 21	31 23	31 25	31 26	
30 7											

Mar.



Mar.



# A Parallel of Days between the Julian and Luni-solar Years.

12

Mar.	May.	July.	Sep.	Nov.	Jan.	Mar.	May.	July.	Sep.	Nov.	Jan.
1 19	1 21	1 3	1 26	1 28	1 1	1 1	1 3	1 5	1 8	1 10	1 12
2 20	2 22	2 24	2 27	2 29	2 2	2 2	2 4	2 6	2 9	2 11	2 13
3 21	3 23	3 25	3 28	IX.	3 3	3 3	3 5	3 7	3 10	3 12	3 14
4 22	4 24	4 26	4 29	VII.	4 4	4 4	4 6	4 8	4 11	4 13	4 15
5 23	5 25	5 27	5 1	5 3	5 5	5 5	5 7	5 9	5 12	5 14	5 16
6 24	6 26	6 28	6 2	6 4	6 6	6 6	6 8	6 10	6 13	6 15	6 17
7 25	7 27	7 29	7 3	7 5	7 7	7 7	7 9	7 11	7 14	7 16	7 18
8 26	8 28	V.	8 4	8 6	8 8	8 8	8 10	8 12	8 15	8 17	8 19
9 27	9 29	8 1	8 5	8 7	9 9	9 9	9 11	9 13	9 16	9 18	9 20
10 28	III	9 2	9 6	9 8	10 10	10 10	10 12	10 14	10 17	10 19	10 21
11 29	10 1	10 3	10 7	10 9	11 11	11 11	11 13	11 15	11 18	11 20	11 22
I	11 2	11 4	11 8	11 10	12 12	12 12	12 14	12 16	12 19	12 21	12 23
I.	12 3	12 5	12 9	12 11	13 13	13 13	13 15	13 17	13 20	13 22	13 24
12 1	13 4	13 6	13 10	13 12	14 14	14 14	14 16	14 18	14 21	14 23	14 25
13 2	14 5	14 7	14 11	14 13	15 15	15 15	15 17	15 19	15 22	15 24	15 26
14 3	15 6	15 8	15 12	15 14	16 16	16 16	16 18	16 20	16 23	16 25	16 27
15 4	16 7	16 9	16 13	16 15	17 17	17 17	17 19	17 21	17 24	17 26	17 28
16 5	17 8	17 10	17 14	17 16	18 18	18 18	18 20	18 22	18 25	18 27	18 29
17 6	18 9	18 11	18 15	18 17	19 19	19 19	19 21	19 23	19 26	19 28	19 30
18 7	19 10	19 12	19 16	19 18	20 20	20 20	20 22	20 24	20 27	X.	XII.
19 8	20 11	20 13	20 17	20 19	21 21	21 21	21 23	21 25	21 28	21 30	20 1
20 9	21 12	21 14	21 18	21 20	22 22	22 22	22 24	22 26	22 29	22 30	21 2
21 10	22 13	22 15	22 19	22 21	23 23	23 23	23 25	23 27	23 30	VIII.	22 3
22 11	23 14	23 16	23 20	23 22	24 24	24 24	24 26	24 28	24 30	24 1	23 4
23 12	24 15	24 17	24 21	24 23	25 25	25 25	25 27	25 29	25 30	25 2	24 5
24 13	25 16	25 18	25 22	25 24	26 26	26 26	26 28	26 30	26 30	26 3	25 6
1689	26 17	26 19	26 23	26 25	27 27	27 27	27 29	27 30	27 30	27 4	26 7
25 14	27 18	27 20	27 24	27 26	28 28	28 28	28 30	28 30	28 30	28 5	27 8
26 15	28 19	28 21	28 25	28 27	29 29	29 29	29 30	29 30	29 30	29 6	28 9
27 16	29 20	29 22	29 26	29 28	30 30	30 30	30 30	30 30	30 30	30 7	29 10
28 17	30 21	30 23	30 27	30 29	XII.	XII.	31 1	31 1	31 1	31 8	30 11
29 18	31 22	31 24	Oct.	Dec.	31 1	31 1	31 3	31 3	31 3	Dec.	31 12
30 19	June	Aug.	1 27	1 29	Feb.	1 2	1 4	1 6	1 8	1 10	1 13
31 20	1 23	1 25	2 28	2 30	2 3	2 3	2 5	2 7	2 9	2 11	2 14
Apri.	2 24	2 26	3 29	3 31	3 4	3 4	3 6	3 8	3 10	3 12	3 15
1 21	3 25	3 27	4 30	4 31	4 5	4 5	4 7	4 9	4 11	4 13	4 16
2 22	4 26	4 28	VIII.	5 1	5 6	5 6	5 8	5 10	5 12	5 14	5 17
3 23	5 27	5 29	5 30	5 31	6 7	6 7	6 9	6 11	6 13	6 15	6 18
4 24	6 28	6 30	6 2	6 3	7 8	7 8	7 10	7 12	7 14	7 16	7 19
5 25	7 29	7 31	7 4	7 5	8 9	8 9	8 11	8 13	8 15	8 17	8 20
6 26	8 30	8 31	8 5	8 6	9 10	9 10	9 12	9 14	9 16	9 18	9 21
7 27	9 1	9 2	9 6	9 7	10 11	10 11	10 13	10 15	10 17	10 19	10 22
8 28	10 2	10 3	10 7	10 8	11 12	11 12	11 14	11 16	11 18	11 20	11 23
9 29	11 3	11 4	11 8	11 9	12 13	12 13	12 15	12 17	12 19	12 21	12 24
10 30	12 4	12 5	12 9	12 10	13 14	13 14	13 16	13 18	13 20	13 22	13 25
II	13 5	13 6	13 10	13 11	14 15	14 15	14 17	14 19	14 21	14 23	14 26
11 1	14 6	14 7	14 11	14 12	15 16	15 16	15 18	15 20	15 22	15 24	15 27
12 2	15 7	15 8	15 12	15 13	16 17	16 17	16 19	16 21	16 23	16 25	16 28
13 3	16 8	16 9	16 13	16 14	17 18	17 18	17 20	17 22	17 24	17 26	17 29
14 4	17 9	17 10	17 14	17 15	18 19	18 19	18 21	18 23	18 25	18 27	XII.
15 5	18 10	18 11	18 15	18 16	19 20	19 20	19 22	19 24	19 26	19 28	18 1
16 6	19 11	19 12	19 16	19 17	20 21	20 21	20 23	20 25	20 27	20 29	19 2
17 7	20 12	20 13	20 17	20 18	21 22	21 22	21 24	21 26	21 28	XI	20 3
18 8	21 13	21 14	21 18	21 19	22 23	22 23	22 25	22 27	22 29	22 30	21 4
19 9	22 14	22 15	22 19	22 20	23 24	23 24	23 26	23 28	23 30	23 30	22 5
20 10	23 15	23 16	23 20	23 21	24 25	24 25	24 27	24 29	24 30	24 30	23 6
21 11	24 16	24 17	24 21	24 22	25 26	25 26	25 28	25 30	25 30	25 30	24 7
22 12	25 17	25 18	25 22	25 23	26 27	26 27	26 29	26 30	26 30	26 30	25 8
23 13	26 18	26 19	26 23	26 24	27 28	27 28	27 30	27 30	27 30	27 30	26 9
24 14	27 19	27 20	27 24	27 25	28 29	28 29	28 30	28 30	28 30	28 30	27 10
25 15	28 20	28 21	28 25	28 26	29 30	29 30	29 30	29 30	29 30	29 30	28 11
26 16	29 21	29 22	29 26	29 27	30 31	30 31	30 31	30 31	30 31	30 31	
27 17	30 22	30 23	30 27	30 28							
28 18		31 24									
29 19		31 25									
30 20											



## A Parallel of Days between the Julian and Luni-Solar Years.

Mar.	May.	July.	Sept.	Nov.	Jan.	Mar.	May.	July.	Sept.	Nov.	Jan.
1 12	1 13	1 15	1 13	1 20	1 22	1 23	1 25	1 27	1 1	1 3	1 5
2 13	2 14	2 16	2 19	2 21	2 23	2 24	2 26	2 28	2 2	2 4	2 6
3 14	3 15	3 17	3 20	3 22	3 24	3 25	3 27	3 29	3 3	3 5	3 7
4 15	4 16	4 18	4 21	4 23	4 25	4 26	4 28	V.	4 4	4 6	4 8
5 16	5 17	5 19	5 22	5 24	5 26	5 27	5 29	4 1	5 5	5 7	5 9
6 17	6 18	6 20	6 23	6 25	6 27	6 28	III.	5 2	6 6	6 8	6 10
7 18	7 19	7 21	7 24	7 26	7 28	7 29	6 1	6 3	7 7	7 9	7 11
8 19	8 20	8 22	8 25	8 27	8 29	{ 1 12 }	7 2	7 4	8 8	8 10	8 12
9 20	9 21	9 23	9 26	9 28	XI.		8 3	8 5	9 9	9 11	9 13
10 21	10 22	10 24	10 27	10 29	9 1	I.	9 4	9 6	10 10	10 12	10 14
11 22	11 23	11 25	11 28	IX.	10 2	8 1	10 5	10 7	11 11	11 13	11 15
12 23	12 24	12 26	12 29	11 1	11 3	9 2	11 6	11 8	12 12	12 14	12 16
13 24	13 25	13 27	VII.	12 2	12 4	10 3	12 7	12 9	13 13	13 15	13 17
14 25	14 26	14 28	13 1	13 3	13 5	11 4	13 8	13 10	14 14	14 16	14 18
15 26	15 27	15 29	14 2	14 4	14 6	12 5	14 9	14 11	15 15	15 17	15 19
16 27	16 28	V.	15 3	15 5	15 7	13 6	15 10	15 12	16 16	16 18	16 20
17 28	17 29	III.	16 4	16 6	16 8	14 7	16 11	16 13	17 17	17 19	17 21
18 29	18 30	18 1	17 5	17 7	17 9	15 8	17 12	17 14	18 18	18 20	18 22
19 30	19 1	19 3	18 6	18 8	18 10	16 9	18 13	18 15	19 19	19 21	19 23
{ I 11 }	20 3	20 5	19 7	19 9	19 11	17 10	19 14	19 16	20 20	20 22	20 24
	21 4	21 6	20 8	20 10	20 12	18 11	20 15	20 17	21 21	21 23	21 25
20 1	22 5	22 7	21 9	21 11	21 13	19 12	21 16	21 18	22 22	22 24	22 26
21 2	23 6	23 8	22 10	22 12	22 14	20 13	22 17	22 19	23 23	23 25	23 27
22 3	24 7	24 9	23 11	23 13	23 15	21 14	23 18	23 20	24 24	24 26	24 28
23 4	25 8	25 10	24 12	24 14	24 16	22 15	24 19	24 21	25 25	25 27	25 29
24 5	26 9	26 11	25 13	25 15	25 17	23 16	25 20	25 22	26 26	26 28	26 30
369 I.	27 10	27 12	26 14	26 16	26 18	24 17	26 21	26 23	27 27	27 29	XII.
25 6	28 11	28 13	27 15	27 17	27 19	25 18	27 22	27 24	28 28	28 30	27 1
26 7	29 12	29 14	28 16	28 18	28 20	26 19	28 23	28 25	29 29	29 31	28 2
27 8	30 13	30 15	29 17	29 19	29 21	27 20	29 24	29 26	Oct. VIII.	30 2	29 3
28 9	31 14	31 16	30 18	30 20	30 22	28 21	30 25	30 27	1	Dec.	30 4
29 10	June	Aug.	Oct.	Dec.	Feb.	29 22	31 26	31 28	2	Feb.	31 5
30 11	1 15	1 17	1 19	1 21	1 24	30 23	June.	Aug.	3	1 3	1 6
31 12	2 16	2 18	2 20	2 22	2 25	31 24	1 27	1 29	4	2 4	2 7
Apr.	3 17	3 19	3 21	3 23	3 26	Apr.	2 28	2 30	5	3 5	3 8
1 13	4 18	4 20	4 22	4 24	4 27		3 29	3 29	VI.	6	4 6
2 14	5 19	5 21	5 23	5 25	5 28	1 25	4 30	4 1	7	5 7	5 10
3 15	6 20	6 22	6 24	6 26	6 29	2 26	5 1	5 3	8	6 8	6 11
4 16	7 21	7 23	7 25	7 27	7 30	3 27	6 2	6 4	9	7 9	7 12
5 17	8 22	8 24	8 26	8 28	XII.	4 28	7 3	7 5	10	8 10	8 13
6 18	9 23	9 25	9 27	9 29	8 1	5 29	8 4	8 6	11	9 11	9 14
7 19	10 24	10 26	10 28	10 30	9 2	6 30	9 5	9 7	12	10 12	10 15
8 20	11 25	11 27	11 29	X.	10 3	II.	10 6	10 8	13	11 13	11 16
9 21	12 26	12 28	12 30	11 1	11 4		7 1	11 7	11 9	14	12 14
10 22	13 27	13 29	VIII.	12 2	12 5	8 2	12 8	12 10	15	13 15	13 18
11 23	14 28	14 30	13 1	13 3	13 6	9 3	13 9	13 11	16	14 16	14 19
12 24	15 29	VI.	14 2	14 4	14 7	10 4	14 10	14 12	17	15 17	15 20
13 25	16 30	15 1	15 3	15 5	15 8	11 5	15 11	15 13	18	16 18	16 21
14 26	IV.	16 2	16 4	16 6	16 9	12 6	16 12	16 14	19	17 19	17 22
15 27	17 1	17 3	17 5	17 7	17 10	13 7	17 13	17 15	20	18 20	18 23
16 28	18 2	18 4	18 6	18 8	18 11	14 8	18 14	18 16	21	19 21	19 24
17 29	19 3	19 5	19 7	19 9	19 12	15 9	19 15	19 17	22	20 22	20 25
18 30	20 4	20 6	20 8	20 10	20 13	16 10	20 16	20 18	23	21 23	21 26
II	21 5	21 7	21 9	21 11	21 14	17 11	21 17	21 19	24	22 24	22 27
	22 6	22 8	22 10	22 12	22 15	18 12	22 18	22 20	25	23 25	23 28
19 1	23 7	23 9	23 11	23 13	23 16	19 13	23 19	23 21	26	24 26	24 29
20 2	24 8	24 10	24 12	24 14	24 17	20 14	24 20	24 22	27	25 27	{ I 13 }
21 3	25 9	25 11	25 13	25 15	25 18	21 15	25 21	25 23	28	26 28	
22 4	26 10	26 12	26 14	26 16	26 19	22 16	26 22	26 24	IX.	29	25 1
23 5	27 11	27 13	27 15	27 17	27 20	23 17	27 23	27 25	30	20 1	26 2
24 6	28 12	28 14	28 16	28 18	28 21	24 18	28 24	28 26	31	21 2	27 3
25 7	29 13	29 15	29 17	29 19	29 22	25 19	29 25	29 27		22 3	28 4
26 8	30 14	30 16	30 18	30 20		26 20	30 26	30 28		23 4	
27 9	31 17	31 19	31 21	31 23		27 21		31 29			
28 10						28 22					
29 11						29 23					
30 12						30 24					



# A Parallel of Days between the Julian and Luni-solar Years.

15

Mar.	May.	July.	Sept.	Nov.	Janu.	Mar.	May.	July.	Sept.	Nov.	Jan.
1 5	1 7	1 9	1 12	1 14	1 16	1 16	1 16	1 18	1 21	1 23	1 25
2 6	2 8	2 10	2 13	2 15	2 17	2 17	2 17	2 19	2 22	2 24	2 26
3 7	3 9	3 11	3 14	3 16	3 18	3 18	3 18	3 20	3 23	3 25	3 27
4 8	4 10	4 12	4 15	4 17	4 19	4 19	4 19	4 21	4 24	4 26	4 28
5 9	5 11	5 13	5 16	5 18	5 20	5 20	5 20	5 22	5 25	5 27	5 29
6 10	6 12	6 14	6 17	6 19	6 21	6 21	6 21	6 23	6 26	6 28	XI.
7 11	7 13	7 15	7 18	7 20	7 22	7 22	7 22	7 24	7 27	7 29	1
8 12	8 14	8 16	8 19	8 21	8 23	8 23	8 23	8 25	8 28	IX.	2
9 13	9 15	9 17	9 20	9 22	9 24	9 24	9 24	9 26	9 29	8 1	3
10 14	10 16	10 18	10 21	10 23	10 25	10 25	10 25	10 27	VII.	9 2	4
11 15	11 17	11 19	11 22	11 24	11 26	11 26	11 26	11 28	10 1	10 3	5
12 16	12 18	12 20	12 23	12 25	12 27	12 27	12 27	12 29	11 2	11 4	6
13 17	13 19	13 21	13 24	13 26	13 28	13 28	13 28	V.	12 3	12 5	7
14 18	14 20	14 22	14 25	14 27	14 29	14 29	14 29	13 1	13 4	13 6	8
15 19	15 21	15 23	15 26	15 28	15 30	15 30	15 30	14 2	14 5	14 7	9
16 20	16 22	16 24	16 27	16 29	XII.	16 31	III.	15 3	15 6	15 8	10
17 21	17 23	17 25	17 28	17 30	16 1	{ 14 I. }	16 2	16 4	16 7	16 9	11
18 22	18 24	18 26	18 29	X.	17 2		17 3	17 5	17 8	17 10	17 12
19 23	19 25	19 27	19 30	18 1	18 3	17 1	18 4	18 6	18 9	18 11	13
20 24	20 26	20 28	VIII.	19 2	19 4	18 2	19 5	19 7	19 10	19 12	14
21 25	21 27	21 29	20 1	20 3	20 5	19 3	20 6	20 8	20 11	20 13	15
22 26	22 28	22 30	21 2	21 4	21 6	20 4	21 7	21 9	21 12	21 14	16
23 27	23 29	VI.	22 3	22 5	22 7	21 5	22 8	22 10	22 13	22 15	17
24 28	24 30	23 1	23 4	23 6	23 8	22 6	23 9	23 11	23 14	23 16	18
1693	IV.	24 2	24 5	24 7	24 9	23 8	24 10	24 12	24 15	24 17	19
25 29	25 1	25 3	25 6	25 8	25 10	24 9	25 11	25 13	25 16	25 18	20
26 30	26 2	26 4	26 7	26 9	26 11	25 10	26 12	26 14	26 17	26 19	21
II.	27 3	27 5	27 8	27 10	27 12	26 11	27 13	27 15	27 18	27 20	22
27 1	28 4	28 6	28 9	28 11	28 13	27 12	28 14	28 16	28 19	28 21	23
28 2	29 5	29 7	29 10	29 12	29 14	28 13	29 15	29 17	29 20	29 22	24
29 3	30 6	30 8	30 11	30 13	30 15	29 14	30 16	30 18	30 21	30 23	25
30 4	31 7	31 9	Oct.	Dec.	31 16	30 15	31 17	31 19	Oct.	Dec.	31 26
31 5	Jun.	Aug.	1 12	1 14	Febr.	31 16	June.	Aug.	1 22	1 24	Feb.
Apr.	1 8	1 10	2 13	2 15	1 17	1 17	1 18	1 20	2 23	2 25	1 27
1 6	2 9	2 11	3 14	3 16	2 18	2 18	2 19	2 21	3 24	3 26	2 28
2 7	3 10	3 12	4 15	4 17	3 19	3 19	3 20	3 22	4 23	4 25	3 29
3 8	4 11	4 13	5 16	5 18	4 20	4 20	4 21	4 23	5 26	5 28	4 30
4 9	5 12	5 14	6 17	6 19	5 21	5 21	5 22	5 24	6 27	6 29	XII.
5 10	6 13	6 15	7 18	7 20	6 22	6 22	6 23	6 25	7 28	7 30	5 1
6 11	7 14	7 16	8 19	8 21	7 23	7 23	7 24	7 26	8 29	IX.	6
7 12	8 15	8 17	9 20	9 22	8 24	8 24	8 25	8 27	9 30	8 1	7
8 13	9 16	9 18	10 21	10 23	9 25	9 25	9 26	9 28	VIII.	9 2	8
9 14	10 17	10 19	11 22	11 24	10 26	10 26	10 27	10 29	10 1	10 3	9
10 15	11 18	11 20	12 23	12 25	11 27	11 27	11 28	11 30	11 2	11 4	10
11 16	12 19	12 21	13 24	13 26	12 28	12 28	12 29	VI.	12 3	12 5	11
12 17	13 20	13 22	14 25	14 27	13 29	13 29	13 30	12 1	13 4	13 6	12
13 18	14 21	14 23	15 26	15 28	XIII.	XIII.	10 25	13 2	14 5	14 7	13
14 19	15 22	15 24	16 27	16 29	14 1	14 1	11 26	14 3	15 6	15 8	14
15 20	16 23	16 25	17 28	XI.	15 2	15 2	12 27	15 4	16 7	16 9	15
16 21	17 24	17 26	18 29	17 1	16 3	16 3	13 28	16 5	17 8	17 10	16
17 22	18 25	18 27	IX.	18 2	17 4	17 4	14 29	17 6	18 9	18 11	17
18 23	19 26	19 28	19 1	19 3	18 5	18 5	15 30	18 7	19 10	19 12	18
19 24	20 27	20 29	20 2	20 4	19 6	19 6	II.	19 8	20 11	20 13	19
20 25	21 28	21 29	21 3	21 5	20 7	20 7	16 1	20 9	21 12	21 14	20
21 26	22 29	22 29	22 4	22 6	21 8	21 8	17 2	21 10	22 13	22 15	21
22 27	V.	22 2	23 5	23 7	22 19	22 19	18 3	22 11	23 14	23 16	22
23 28	23 1	23 3	24 6	24 8	23 10	23 10	19 4	23 12	24 15	24 17	23
24 29	24 2	24 4	25 7	25 9	24 11	24 11	20 5	24 13	25 16	25 18	24
III.	25 3	25 5	26 8	26 10	25 12	25 12	21 6	25 14	26 17	26 19	25
25 1	26 4	26 6	27 9	27 11	26 13	26 13	22 7	26 15	27 18	27 20	26
26 2	27 5	27 7	28 10	28 12	27 14	27 14	23 8	27 16	28 19	28 21	27
27 3	28 6	28 8	29 11	29 13	28 15	28 15	24 9	28 17	29 20	29 22	28
28 4	29 7	29 9	30 12	30 14			25 10	29 18	30 21	30 23	29
29 5	30 8	30 10	31 13	31 15			26 11	30 19	31 22	31 24	30
30 6	31 11	31 11					27 12	31 20			
							28 13				
							29 14				
							30 15				

Mar.



Mar.	May.	July.	Sept.	Nov.	Jan.	Mar.	May.	July.	Sept.	Nov.	Jan.
1 25	1 27	1 29	1 3	1 5	1 7	1 8	1 9	1 11	1 14	1 16	1 18
2 26	2 28	V.	2 4	2 6	2 8	2 9	2 10	2 12	2 15	2 17	2 19
3 27	3 29	III	3 5	3 7	3 9	3 10	3 11	3 13	3 16	3 18	3 20
4 28	4 1	III	4 6	4 8	4 10	4 11	4 12	4 14	4 17	4 19	4 21
5 29	5 2	I.	5 7	5 9	5 11	5 12	5 13	5 15	5 18	5 20	5 22
	6 3	I.	6 8	6 10	6 12	6 13	6 14	6 16	6 19	6 21	6 23
	7 4	I.	7 9	7 11	7 13	7 14	7 15	7 17	7 20	7 22	7 24
	8 5		8 10	8 12	8 14	8 15	8 16	8 18	8 21	8 23	8 25
	9 6		9 11	9 13	9 15	9 16	9 17	9 19	9 22	9 24	9 26
	10 7		10 12	10 14	10 16	10 17	10 18	10 20	10 23	10 25	10 27
	11 8		11 13	11 15	11 17	11 18	11 19	11 21	11 24	11 26	11 28
	12 9		12 14	12 16	12 18	12 19	12 20	12 22	12 25	12 27	12 29
	13 10		13 15	13 17	13 19	13 20	13 21	13 23	13 26	13 28	XI.
	14 11		14 16	14 18	14 20	14 21	14 22	14 24	14 27	14 29	13 1
	15 12		15 17	15 19	15 21	15 22	15 23	15 25	15 28		14 2
	16 13		16 18	16 20	16 22	16 23	16 24	16 26	16 29		15 3
	17 14		17 19	17 21	17 23	17 24	17 25	17 27	VII.	16 2	16 4
	18 15		18 20	18 22	18 24	18 25	18 26	18 28	17 1	17 3	17 5
	19 16		19 21	19 23	19 25	19 26	19 27	19 29	18 2	18 4	18 6
	20 17		20 22	20 24	20 26	20 27	20 28	20 29	V.	19 5	19 7
	21 18		21 23	21 25	21 27	21 28	21 29	21 29	20 4	20 6	20 8
	22 19		22 24	22 26	22 28	22 29	22 29	22 29	20 4	20 6	20 8
	23 20		23 25	23 27	23 29	23 30	23 30	23 30	21 2	21 5	21 7
	24 21		24 26	24 28	24 30			24 1	21 2	21 5	21 7
	25 22		25 27	25 29	25 30			24 2	22 3	22 6	22 8
	26 23		26 28	26 30				24 3	23 4	23 7	23 9
	27 24		27 29					24 4	24 5	24 8	24 10
	28 25		28 30					24 5	25 6	25 9	25 11
	29 26		29 1					24 6	26 7	26 10	26 12
	30 27		30 2					24 7	27 8	27 11	27 13
	31 28		31 3					24 8	28 9	28 12	28 14
			31 4					24 9	29 10	29 13	29 15
			31 5					24 10	30 11	30 14	30 16
			31 6					24 11	31 12		31 19
			31 7					24 12			
			31 8					24 13			
			31 9					24 14			
			31 10					24 15			
			31 11					24 16			
			31 12					24 17			
			31 13					24 18			
			31 14					24 19			
			31 15					24 20			
			31 16					24 21			
			31 17					24 22			
			31 18					24 23			
			31 19					24 24			
			31 20					24 25			
			31 21					24 26			
			31 22					24 27			
			31 23					24 28			
			31 24					24 29			
			31 25					24 30			
			31 26					24 31			
			31 27					24 32			
			31 28					24 33			
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			31 31					24 36			
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			31 34					24 39			
			31 35					24 40			
			31 36					24 41			
			31 37					24 42			
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			31 40					24 45			
			31 41					24 46			
			31 42					24 47			
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			31 44					24 49			
			31 45					24 50			
			31 46					24 51			
			31 47					24 52			
			31 48					24 53			
			31 49					24 54			
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			31 93					24 98			
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			31 95					24 100			
			31 96					24 101			
			31 97					24 102			
			31 98					24 103			
			31 99					24 104			
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			31 102					24 107			
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			31 118					24 123			
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			31 132					24 137			
			31 133					24 138			
			31 134					24 139			
			31 135					24 140			
			31 136					24 141			
			31 137					24 142			
			31 138					24 143			
			31 139					24 144			
			31 140					24 145			
			31 141					24 146			
			31 142					24 147			
			31 143					24 148			
			31 144					24 149			



# A Parallel of Days between the Julian and Luni-solar Years.

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Mar.	May.	July.	Sept.	Nov.	Jan.	Mar.	May.	July.	Sept.	Nov.	Jan.
1 18	1 20	1 22	1 25	1 27	1 29	1 29	1 2	1 4	1 7	1 9	1 11
2 19	2 21	2 23	2 26	2 28	XI.	I	2 3	2 5	2 8	2 10	2 12
3 20	3 22	3 24	3 27	3 29	2 1	I	3 4	3 6	3 9	3 11	3 13
4 21	4 23	4 25	4 28	IX.	3 2	I	4 5	4 7	4 10	4 12	4 14
5 22	5 24	5 26	5 29	4 1	4 3	I	5 6	5 8	5 11	5 13	5 15
6 23	6 25	6 27	VII.	5 2	5 4	2 1	6 7	6 9	6 12	6 14	6 16
7 24	7 26	7 28	6 1	6 3	6 5	3 2	7 8	7 10	7 13	7 15	7 17
8 25	8 27	8 29	7 2	7 4	7 6	4 3	8 9	8 11	8 14	8 16	8 18
9 26	9 28	V.	8 3	8 5	8 7	5 4	9 10	9 12	9 15	9 17	9 19
10 27	10 29	9 1	9 4	9 6	9 8	6 5	10 11	10 13	10 16	10 18	10 20
11 28	III.	10 2	10 5	10 7	10 9	7 6	11 12	11 14	11 17	11 19	11 21
12 29	11 1	11 3	11 6	11 8	11 10	8 7	12 13	12 15	12 18	12 20	12 22
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13 1	14 4	14 6	14 9	14 11	14 13	11 10	15 16	15 18	15 21	15 23	15 25
14 2	15 5	15 7	15 10	15 12	15 14	12 11	16 17	16 19	16 22	16 24	16 26
15 3	16 6	16 8	16 11	16 13	16 15	13 12	17 18	17 20	17 23	17 25	17 27
16 4	17 7	17 9	17 12	17 14	17 16	14 13	18 19	18 21	18 24	18 26	18 28
17 5	18 8	18 10	18 13	18 15	18 17	15 14	19 20	19 22	19 25	19 27	19 29
18 6	19 9	19 11	19 14	19 16	19 18	16 15	20 21	20 23	20 26	20 28	20 30
19 7	20 10	20 12	20 15	20 17	20 19	17 16	21 22	21 24	21 27	21 29	XII.
20 8	21 11	21 13	21 16	21 18	21 20	18 17	22 23	22 25	22 28	22 30	21 1
21 9	22 12	22 14	22 17	22 19	22 21	19 18	23 24	23 26	23 29	X.	22 2
22 10	23 13	23 15	23 18	23 20	23 22	20 19	24 25	24 27	24 30	23 1	23 3
23 11	24 14	24 16	24 19	24 21	24 23	21 20	25 26	25 28	VIII	24 2	24 4
24 12	25 15	25 17	25 20	25 22	25 24	22 21	26 27	26 29	25 1	25 3	25 5
1697	26 16	26 18	26 21	26 23	26 25	23 22	27 28	27 30	26 2	26 4	26 6
25 13	27 17	27 19	27 22	27 24	27 26	24 23	28 29	29 30	27 3	27 5	27 7
26 14	28 18	28 20	28 23	28 25	28 27	25 24	29 30	IV.	28 4	28 6	28 8
27 15	29 19	29 21	29 24	29 26	29 28	26 25	30 1	30 3	29 5	29 7	29 9
28 16	30 20	30 22	30 25	30 27	30 29	27 26	31 2	31 4	30 6	30 8	30 10
29 17	31 21	31 23	Oct.	Dec.	31 30	28 27	June.	Aug.	Oct.	Dec.	31 11
30 18	1 22	1 24	1 26	1 28	Febr. XII.	29 28	1 3	1 5	1 7	1 9	Feb.
31 19	2 23	2 25	2 27	2 29	1 1	30 29	2 4	2 6	2 8	2 10	1 12
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1 20	4 25	4 27	4 29	X.	3 3	Apr.	4 6	4 8	4 10	4 12	3 14
2 21	5 26	5 28	5 30	4 1	4 4	I	5 7	5 9	5 11	5 13	4 15
3 22	6 27	6 29	VIII.	5 2	5 5	2 2	6 8	6 10	6 12	6 14	5 16
4 23	7 28	7 30	6 1	6 3	6 6	3 3	7 9	7 11	7 13	7 15	6 17
5 24	8 29	8 31	7 2	7 4	7 7	4 4	8 10	8 12	8 14	8 16	7 18
6 25	9 30	8 1	8 3	8 5	8 8	5 5	9 11	9 13	9 15	9 17	8 19
7 26	IV.	9 2	9 4	9 6	9 9	6 6	10 12	10 14	10 16	10 18	9 20
8 27	10 1	10 3	10 5	10 7	10 10	7 7	11 13	11 15	11 17	11 19	10 21
9 28	11 2	11 4	11 6	11 8	11 11	8 8	12 14	12 16	12 18	12 20	11 22
10 29	12 3	12 5	12 7	12 9	12 12	9 9	13 15	13 17	13 19	13 21	12 23
11 30	13 4	13 6	13 8	13 10	13 13	10 10	14 16	14 18	14 20	14 22	13 24
I	14 5	14 7	14 9	14 11	14 14	11 11	15 17	15 19	15 21	15 23	14 25
II.	15 6	15 8	15 10	15 12	15 15	12 12	16 18	16 20	16 22	16 24	15 26
12 1	16 7	16 9	16 11	16 13	16 16	13 13	17 19	17 21	17 23	17 25	16 27
13 2	17 8	17 10	17 12	17 14	17 17	14 14	18 20	18 22	18 24	18 26	17 28
14 3	18 9	18 11	18 13	18 15	18 18	15 15	19 21	19 23	19 25	19 27	18 29
15 4	19 10	19 12	19 14	19 16	19 19	16 16	20 22	20 24	20 26	20 28	XIII.
16 5	20 11	20 13	20 15	20 17	20 20	17 17	21 23	21 25	21 27	21 29	19 1
17 6	21 12	21 14	21 16	21 18	21 21	18 18	22 24	22 26	22 28	XI.	20 2
18 7	22 13	22 15	22 17	22 19	22 22	19 19	23 25	23 27	23 29	22 1	21 3
19 8	23 14	23 16	23 18	23 20	23 23	20 20	24 26	24 28	IX.	23 2	22 4
20 9	24 15	24 17	24 19	24 21	24 24	21 21	25 27	25 29	24 1	24 3	23 5
21 10	25 16	25 18	25 20	25 22	25 25	22 22	26 28	VII.	25 2	25 4	24 6
22 11	26 17	26 19	26 21	26 23	26 26	23 23	27 29	26 1	26 3	26 5	25 7
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24 13	28 19	28 21	28 23	28 25	28 28	25 25	28 1	28 3	28 5	28 7	27 9
25 14	29 20	29 22	29 24	29 26	29 29	26 26	29 2	29 4	29 6	29 8	28 10
26 15	30 21	30 23	30 25	30 27	30 30	27 27	30 3	30 5	30 7	30 9	
27 16	31 22	31 24	31 26	31 28	31 31	28 28	31 4	31 6	31 8	31 10	
28 17						29 29	III.				
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30 19											

E

Mar.



Mar.	Apr.	May.	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.
1 11	1 11	1 11	1 13	1 13	1 15	1 16	1 17	1 18	1 19	1 20	1 22
2 12	2 12	2 12	2 14	2 14	2 16	2 17	2 18	2 19	2 20	2 21	2 23
3 13	3 13	3 13	3 15	3 15	3 17	3 18	3 19	3 20	3 21	3 22	3 24
4 14	4 14	4 14	4 16	4 16	4 18	4 19	4 20	4 21	4 22	4 23	4 25
5 15	5 15	5 15	5 17	5 17	5 19	5 20	5 21	5 22	5 23	5 24	5 26
6 16	6 16	6 16	6 18	6 18	6 20	6 21	6 22	6 23	6 24	6 25	6 27
7 17	7 17	7 17	7 19	7 19	7 21	7 22	7 23	7 24	7 25	7 26	7 28
8 18	8 18	8 18	8 20	8 20	8 22	8 23	8 24	8 25	8 26	8 27	8 29
9 19	9 19	9 19	9 21	9 21	9 23	9 24	9 25	9 26	9 27	9 28	9 30
10 20	10 20	10 20	10 22	10 22	10 24	10 25	10 26	10 27	10 28	10 29	XII.
11 21	11 21	11 21	11 23	11 23	11 25	11 26	11 27	11 28	11 29	XI.	10 1
12 22	12 22	12 22	12 24	12 24	12 26	12 27	12 28	12 29	12 30	11 1	11 2
13 23	13 23	13 23	13 25	13 25	13 27	13 28	13 29	IX.	X.	12 2	12 3
14 24	14 24	14 24	14 26	14 26	14 28	14 29	14 30	13 1	13 1	13 3	13 4
15 25	15 25	15 25	15 27	15 27	15 29	VII.	VIII.	14 2	14 2	14 4	14 5
16 26	16 26	16 26	16 28	16 28	16 30	VI.	15 1	15 1	15 3	15 5	15 6
17 27	17 27	17 27	17 29	17 29	17 31	17 1	16 2	16 2	16 4	16 6	16 7
18 28	18 28	18 28	18 30	V.	18 1	18 2	17 3	17 3	17 5	17 7	17 8
19 29	19 29	19 29	IV.	18 1	18 2	18 4	18 4	18 6	18 6	18 8	18 9
20 30	20 30	19 29	19 1	19 2	19 3	19 5	19 5	19 7	19 7	19 9	19 10
21 31	II	20 1	20 2	20 3	20 4	20 6	20 6	20 8	20 8	20 10	20 11
I	21 1	21 2	21 3	21 4	21 5	21 7	21 7	21 9	21 9	21 11	21 12
19	22 2	22 3	22 4	22 5	22 6	22 8	22 8	22 10	22 10	22 12	22 13
I.	23 3	23 4	23 5	23 6	23 7	23 9	23 9	23 11	23 11	23 13	23 14
22 1	24 4	24 5	24 6	24 7	24 8	24 10	24 10	24 12	24 12	24 14	24 15
23 2	25 5	25 6	25 7	25 8	25 9	25 11	25 11	25 13	25 13	25 15	25 16
24 3	26 6	26 7	26 8	26 9	26 10	26 12	26 12	26 14	26 14	26 16	26 17
1699	27 7	27 8	27 9	27 10	27 11	27 13	27 13	27 15	27 15	27 17	27 18
25 4	28 8	28 9	28 10	28 11	28 12	28 14	28 14	28 16	28 16	28 18	28 19
26 5	29 9	29 10	29 11	29 12	29 13	29 15	29 15	29 17	29 17	29 19	29 20
27 6	30 10	30 11	30 12	30 13	30 14	30 16	30 16	30 18	30 18	30 20	30 21
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The fore-going *Kalendar*, or *Parallel of Days*, is for 19 Years; at the end whereof the two Accounts, viz. the *Julian* and *Luni-Solar*, do exactly balance one another, *scilicet erat in principio*, and four or five times in the *sexta denique*, or 19 years, they walk very friendly together, hand in hand, cheek by jowl, Day by Day, sometimes a whole Month, sometimes two (almost.)

The next nineteen Years repeat the same again, only with the difference of one Day more or less in some years; by reason of the Leap Years every fourth; and that the XIIth. Month, in the *Luni-Solar* or *Garter-Year*, has sometimes 30 Days, some times 31.

An incomparable person sent me two or three *Objections* upon the foregoing Contrivance: To which I returned *Answers*, viz.

*Object. 1.* I received yours with the *Almonac*, &c. and communicated it to A, B, C, &c. some of them would have examined your Design by its agreement with the *Gregorian* or *Julian* Accounts; but others thought that unreasonable to make them Judges, who stand accused of Error.

*Ans.* I must return those of your company my best Thanks, who thought it unreasonable to have me tried by the *Julian* Account, or examined at *Cæsar's* Tribunal: From which I must have Appealed: And indeed I see no reason why we should be concern'd to follow any longer an Usurper, especially in his Errors: but he having commanded so many Legions, invaded our Isle, &c. I foresee the force and prejudice of education may engage some to take his part, right, or wrong; and therefore forbear. As for the *Gregorian* Way, 'tis but the *Julian* Account, rather new modell'd, or mended, than (as they call it) Reformed: For the *Julian* Reckoning was far from ever being right. And tho the *Gregorian* Account be much more exact than the other, yet is it not altogether without its Errors excepted. So that upon the whole I expect in point of Justice, rather to be tried before an Inquest, or Court of Astronomers, than judged by the Pope or Emperor.

*Object. 2.* I do not see how the Day whereon the Moon changes, being designed to be first of the Month, can consist with putting 31 days into any Month, there being above 11 hours short of 30 Days in any Month between Change and Change.

*Ans.* If the true Month of Conjunction, between Change and Change, consist of Days 29 $\frac{1}{2}$  and 44 min. 3 sec. 10 thirds, &c. those overplus min. sec. &c. of several Months, (being near three quarters of an hour every Month, and about 14 days in 34 Years) put together do (at certain Periods) at length amount to one whole Day, which I make the 31st. of some of the Intercalar Months, and so still balance the Account: or, if you please, those Fragments of time are melted together into the Mass or Mold of one whole Day; and thus tho no one month in any Year of my *Almonac*, (I might add also, tho no one Year in the Period, nor Day in the Year or Month) is exactly a just and true one, yet all put together, the whole Account is true (morally;) and tho sometimes my Months end before the Change, sometimes after; yet things are so ordered, that every one of them begins and ends within a day of the Change. Thus the Vibrations of a Pendulum are sometimes on one side the Perpendicular, and sometimes on the other: And thus (Philosophically speaking) the Vibrations or Vicissitudes of Day and Night, Heat and Cold, Summer and Winter, make the Sap rise, and Plants and Trees to grow. In short, as the Days of my Months vibrate or play about the Moons true course; so do my *Garter*-Months, or *Luni-Solar* Year dance about the Sun or Solar Year, sometimes before it, sometimes after; and sometimes also, as in dancing, they close and kiss; and so I civilly take my leave of that Objection.

*Object. 3.* I do not find your *Almonac* fitted to the Festivals of the Church, nor to the Juridical Days of the Law, &c. not knowing whether you intend any Holy-Days to be within the Intercalar Month.

*Ans.* The Movable Feasts of the Church, as *Easter*, and those other that attend it, I have made better provision for than ever they yet had; and so *Easter* Term and *Trinity* will follow of course. The Fixed Festivals may keep the same Days in my Twelve Months as they had in the other, or as in the Apostles times, or as at the time of the Council of *Nice*: Or in short, may be celebrated on such other Days as those to whom it belongs to order such Affairs, shall judge best. And I believe the Saints will not count it any disparagement, to be so placed and seated, as retaining still their former Order, Dignities, Pre-eminences, &c. to have the Additional Honor of being installed, as it were, *Knights of the Garter*. The intercalary thirteenth Month is without any anniversary Festival, and so more fit for Fasting; for it will always fall in Lent: and tho without any Holy-day, it will not be the less fit for the Lawyers to go their Circuits in. The other two Terms might be easily accommodated either as now they are, or as Authority should think fit, if any such Design were to take place in good earnest.



